



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,377	04/11/2006	Osmo Suovaniemi	0933-0269PUS1	9078

2292 7590 01/28/2010
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

GORDON, BRIAN R

ART UNIT	PAPER NUMBER
----------	--------------

1797

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

01/28/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/575,377	Applicant(s) SUOVANIEMI ET AL.	
	Examiner Brian R. Gordon	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12-7-09.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 10, 2009 have been fully considered but they are not persuasive.

Applicant asserts Bertloot does not disclose primary and secondary means. It should be noted that the specification or claim 1 does not define what specific structure applicant considers equivalent to the respective means. In fact the terms "primary" and "secondary" means are not found in the specification. The only description of a means is found in paragraphs 0015-0016. It is assumed that the means described therein is equivalent to the secondary means. However, it is unclear what specific elements define the "primary means".

Applicant has elected to employ 112 6th paragraph, means-plus-function language. As such, it is not required that the prior art references disclose the same structural element applicant intends to be equivalent to such means nor is it required that the prior art explicitly recite that an element equivalent to the means have the same exact function as recited in the means-plus-function language of the claim. It is only required that an equivalent element be structurally capable of performing the function. Applicant's respective means as claimed is/are merely structure that allows for the plunger to be moved for suction and dispensing, respectively. It should be noted the claim does not preclude the respective means from being the same structure. For example, in a conventionally known dispenser which includes a plunger and a knob on the end thereof (see for example knob 24; US 2005/0142038), a user would pull on the

Art Unit: 1797

knob and press on the knob to perform aspiration and dispensing, respectively. There is nothing precluding one from considering the knob or element on the end of the piston 24 as equivalent to a primary means.

Applicant asserts Berteloot does not disclose receiving a sample. This argument is directed to intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. It is not required that the prior art reference disclose that the device be employed for suction, it is only required that the apparatus be structurally capable of receiving a sample. There is nothing precluding the injector of Berteloot from being used separate from the system shown to perform aspiration and dispensing as one chooses.

As to claim 7, as previous stated one is not precluded from using injector separate from the reactor 4. As such, one can detach the injector and use it manually or hold it in one's hand. The term "hand-held" doesn't add any further structure. The term merely implies that the device can be held in a hand.

In view of such the previous rejections, are hereby maintained.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1797

3. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The motor is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The specification states the device is and electric pipettor including a motor. However, no motor or any other electrical component is claimed. It is unclear how the device can function without the motor.

Furthermore there is no disclosure of the method of claims 9-11. There is no disclosure of how one performs the method of claim 9 when the sample has already been received and dispensed in claim 8.

4. Claims 4 and 6 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 4 has been amended. However applicant has failed to specify where the amendments are supported within the original specification. The examiner fails to locate where "an upper flange" is disclosed in the original specification as an element of the claimed invention.

The specification does not provide for the device including multiple channels.

5. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a single liquid dispenser, does not reasonably provide enablement for the device comprising multiple channels. The specification does

Art Unit: 1797

not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification does not provide any explanation of how multiple channels are incorporated within the device as claimed.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

As to claim 1, it is unclear what is meant by "an increased speed". For the purpose of examination, it is assumed that this means moving the plunger in a direction for dispensing. The term is not defined in the specification.

9. The term "increased speed" in claims 1 and 8 is a relative term which renders the claim indefinite. The term "increased" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Any speed greater than zero is an "increased speed".

Art Unit: 1797

While applicant has amended the claim to include "to receive a sample", the amended language suggests the plunger receives a sample. What or where is the sample received? What or where is the sample dispensed from?

As to claim 2 and 10 it is unclear how one can lock an activation of said energy means. An activation is not tangible matter. It is an act or process. It is applicant intention to claim that some element (energy means/spring) is locked in a position to be later activated?

As to claim 4, it is unclear how the device can operate as claimed when no flange is disclosed in the specification.

Claim 7 does not add any additional structure to the dispenser. The claim merely recites the liquid dispenser can be held in a hand.

As to claim 8, it is unclear what is meant by receiving the sample to a tip of the liquid dispenser. Does that mean liquid is simply brought in contact with a tip or does the liquid actually enter the tip? It should be noted the tip is not listed as an element of the dispenser. Where is the tip located relative to the other elements?

As to claim 9, it is unclear where the steps of the claim occur relative to those previously recited in claim 8. In claim 8, the sample has already been received and dispensed. As such, it is unclear if applicant is performing further steps on the same sample that has already been processed in claim 8.

As to claims 9 and 11, it is unclear what receives the sample and where the sample is received.

As to claim 10, it is unclear how the an activation can be locked (as recited above) and launched. It appears that the energy means is locked and launched (released) to perform a specific action.

Applicant may want to consider establishing that the dispenser required in the method of 8 includes the respective means of claim 11 before reciting the steps of claims 9 and 10.

Claim 11 recites "when receiving the sample", it is unclear if this is in reference to the receiving in claim 8 or claim 9.

Claim 11 also recites "when removing the sample". There is no previous recitation of removing a sample. It is unclear if the removing is referring to the emptying of claims 8 or 9.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Berteloot et al., US 5,330,717.

Berteloot et al. discloses electropneumatic apparatus for sampling rapidly predetermined volumes of a mixture. The device is an injector 2 that comprises a rod 20 having an end inserted into the pipette 18 for ejecting the first reagent out of the pipette

Art Unit: 1797

18 by driving the rod 20 into the pipette 18. A piston device (plunger) is provided. It is mounted on top of the pipette holder 16. This piston device includes a piston cylinder 22 (cylinder in body), a piston 24 disposed inside the cylinder 22, and a return spring 26 (energy means) for biasing the piston 24 toward the rod 20. A pin 28 is provided for locking the piston 24 in a position where the return spring 26 is compressed, whereby a user can activate the injector 2 to eject the first reagent out of the pipette 18 into the reactor 4 by removing the pin 28 (secondary/locking/launch means).

12. Claims 1 and 5-8 are rejected under 35 U.S.C. 102(b) or (e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over applicant admission and acknowledgement of the state of the prior art.

Applicant discusses the state of the prior art in paragraphs [0012-0015].

Applicant admits that the electrical hand held pipettors previously exist and that these prior pipettors have structure that allows for the speed of the plunger movement to be controlled for receiving and removal phases. In view of such, the examiner asserts the claims are anticipated by the admission.

In the alternative, applicant further states that it would be obvious to one of ordinary skill in the art to adjust of the speed of the plunger to obtain optimal movement speed. As such, the claims are obvious in view of the prior art as admitted by applicant.

13. Claims 1-2 and 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Burgisser US 2005/0214172.

Burgisser discloses a device and method to meter and dispense very small volumes (lower limit of up to 10 nl) of a liquid to be dispensed in an accurate and

Art Unit: 1797

reproducible manner, surprisingly even when using a syringe with a conventional, motor-driven syringe plunger. Therein, the volume which is dispensed from the tip or is displaced by the syringe plunger respectively consists of two part volumes, namely the drawn-up and then dispensed gas volume and the dispensed liquid volume. During dispensation of the gas volume the syringe plunger is able to be accelerated to a high plunger speed which is necessary for the liquid volume to be accelerated to a flow speed or exit speed respectively being required for overcoming the adhesion forces. An electric motor, preferably a commercially available, inexpensive electric motor is perfectly suitable as a motor-drive. (paragraph 0009).

The combination of the motor and other components has the functions of energy means, locking means, and launching means.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

Art Unit: 1797

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berteloot et al. as applied to claims 1-2 and 5-7 above, and further in view of Rainin et al. US 6,352,673.

Berteloot et al. does not disclose a magnet as a locking means.

Rainin et al. discloses a pipette in which includes an iron or steel ring 113 secured to a top of the plunger 24 and a ring magnet 114 secured to an underside of a top of the pipette body 12 around the access opening for the upper portion 26 of the plunger unit 16. Thus constructed, as the plunger unit 16 approaches the upper stop 18, the magnetic field generated by the magnet 114 attracts the ring 113 to releasably secure the ring to the magnet and the plunger unit at the upper stop 18.

Art Unit: 1797

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize the device of Berteloot et al. may be modified to include the magnetic locking mechanism of Rainin et al. to secure the plunger at the upper position.

18. Claims 3-4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgisser as applied to claims 1-2 and 5-10 above, and further in view of the combined teachings of Berteloot et al. and Rainin et al.

Burgisser et al. does not disclose a spring and magnet as claimed.

However Berteloot et al. discloses a spring energy means for moving a plunger/piston during dispensing and Rainin discloses the use of a magnetic locking means to secure a plunger in place (see teachings recited herein above).

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize the dispensing device of Burgisser may be modified to include an energy and locking means as taught by Berteloot et al. in view of Rainin in order to releasably secure provide movement of the plunger during dispensing.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 1797

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, 1st Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian R Gordon/
Primary Examiner
Art Unit 1797

Application/Control Number: 10/575,377
Art Unit: 1797

Page 13